

## SEQUENCE LISTING

<110> MINERVA BIOTECHNOLOGIES CORPORATION  
Bamdad, Cynthia C

<120> METHODS FOR DIAGNOSIS AND TREATMENT OF CANCER

<130> 13150-70090PCT

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<160> 29

<170> PatentIn version 3.3

<210> 1  
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<212> PRT  
<213> Homo sapiens

<400> 1

Gly Thr Ile Asn Val His Asp Val Glu Thr Gln Phe Asn Gln Tyr Lys  
1 5 10 15

Thr Glu Ala Ala Ser Pro Tyr Asn Leu Thr Ile Ser Asp Val Ser Val  
20 25 30

Ser His His His His His His  
35

<210> 2  
<211> 51  
<212> PRT  
<213> Homo sapiens

<400> 2

Gly Thr Ile Asn Val His Asp Val Glu Thr Gln Phe Asn Gln Tyr Lys  
1 5 10 15

Thr Glu Ala Ala Ser Pro Tyr Asn Leu Thr Ile Ser Asp Val Ser Val  
20 25 30

Ser Asp Val Pro Phe Pro Phe Ser Ala Gln Ser Gly Ala His His His  
35 40 45

His His His  
50

<210> 3  
 <211> 54  
 <212> PRT  
 <213> Homo sapiens

<400> 3

Val Gln Leu Thr Leu Ala Phe Arg Glu Gly Thr Ile Asn Val His Asp  
 1 5 10 15

Val Glu Thr Gln Phe Asn Gln Tyr Lys Thr Glu Ala Ala Ser Pro Tyr  
 20 25 30

Asn Leu Thr Ile Ser Asp Val Ser Val Ser Asp Val Pro Phe Pro Phe  
 35 40 45

His His His His His His  
 50

<210> 4  
 <211> 31  
 <212> PRT  
 <213> Homo sapiens

<400> 4

His His His His His His Gly Phe Leu Gly Leu Ser Asn Ile Lys Phe  
 1 5 10 15

Arg Pro Gly Ser Val Val Val Gln Leu Thr Leu Ala Phe Arg Glu  
 20 25 30

<210> 5  
 <211> 46  
 <212> PRT  
 <213> Homo sapiens

<400> 5

Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His Gly  
 1 5 10 15

Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala Pro  
 20 25 30

Pro Ala His Gly Val Thr Ser Ala His His His His His His  
 35 40 45

<210> 6  
 <211> 33  
 <212> PRT  
 <213> Homo sapiens

<400> 6

Gly Thr Ile Asn Val His Asp Val Glu Thr Gln Phe Asn Gln Tyr Lys  
 1 5 10 15

Thr Glu Ala Ala Ser Pro Tyr Asn Leu Thr Ile Ser Asp Val Ser Val  
 20 25 30

Ser

<210> 7  
 <211> 45  
 <212> PRT  
 <213> Homo sapiens

<400> 7

Gly Thr Ile Asn Val His Asp Val Glu Thr Gln Phe Asn Gln Tyr Lys  
 1 5 10 15

Thr Glu Ala Ala Ser Pro Tyr Asn Leu Thr Ile Ser Asp Val Ser Val  
 20 25 30

Ser Asp Val Pro Phe Pro Phe Ser Ala Gln Ser Gly Ala  
 35 40 45

<210> 8  
 <211> 25  
 <212> PRT  
 <213> Homo sapiens

<400> 8

Gly Phe Leu Gly Leu Ser Asn Ile Lys Phe Arg Pro Gly Ser Val Val  
 1 5 10 15

Val Gln Leu Thr Leu Ala Phe Arg Glu  
 20 25

<210> 9  
 <211> 40  
 <212> PRT  
 <213> Homo sapiens

<400> 9

Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His Gly  
 1 5 10 15

Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala Pro  
 20 25 30

Pro Ala His Gly Val Thr Ser Ala  
 35 40

<210> 10  
 <211> 1255  
 <212> PRT  
 <213> Homo sapiens

&lt;400&gt; 10

Met Thr Pro Gly Thr Gln Ser Pro Phe Phe Leu Leu Leu Leu Leu Thr  
 1 5 10 15

Val Leu Thr Val Val Thr Gly Ser Gly His Ala Ser Ser Thr Pro Gly  
 20 25 30

Gly Glu Lys Glu Thr Ser Ala Thr Gln Arg Ser Ser Val Pro Ser Ser  
 35 40 45

Thr Glu Lys Asn Ala Val Ser Met Thr Ser Ser Val Leu Ser Ser His  
 50 55 60

Ser Pro Gly Ser Gly Ser Ser Thr Thr Gln Gly Gln Asp Val Thr Leu  
 65 70 75 80

Ala Pro Ala Thr Glu Pro Ala Ser Gly Ser Ala Ala Thr Trp Gly Gln  
 85 90 95

Asp Val Thr Ser Val Pro Val Thr Arg Pro Ala Leu Gly Ser Thr Thr  
 100 105 110

Pro Pro Ala His Asp Val Thr Ser Ala Pro Asp Asn Lys Pro Ala Pro  
 115 120 125

Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr  
 130 135 140

Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser  
 145 150 155 160

Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His  
 165 170 175

Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala  
 180 185 190

Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro  
 195 200 205

Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr  
 210 215 220

Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser  
 225 230 235 240

Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His  
 245 250 255

Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala  
 260 265 270

Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro  
275 280 285

Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr  
290 295 300

Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser  
305 310 315 320

Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His  
325 330 335

Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala  
340 345 350

Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro  
355 360 365

Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr  
370 375 380

Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser  
385 390 395 400

Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His  
405 410 415

Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala  
420 425 430

Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro  
435 440 445

Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr  
450 455 460

Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser  
465 470 475 480

Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His  
485 490 495

Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala  
500 505 510

Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro  
515 520 525

Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr  
530 535 540

Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser  
545 550 555 560

Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His  
565 570 575

Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala  
580 585 590

Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro  
595 600 605

Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr  
610 615 620

Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser  
625 630 635 640

Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His  
645 650 655

Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala  
660 665 670

Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro  
675 680 685

Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr  
690 695 700

Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser  
705 710 715 720

Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His  
725 730 735

Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala  
740 745 750

Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro  
755 760 765

Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr  
770 775 780

Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser  
785 790 795 800

Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His  
805 810 815

Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala  
 820 825 830  
 Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro  
 835 840 845  
 Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr  
 850 855 860  
 Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser  
 865 870 875 880  
 Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His  
 885 890 895  
 Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala  
 900 905 910  
 Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro  
 915 920 925  
 Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Asn  
 930 935 940  
 Arg Pro Ala Leu Gly Ser Thr Ala Pro Pro Val His Asn Val Thr Ser  
 945 950 955 960  
 Ala Ser Gly Ser Ala Ser Gly Ser Ala Ser Thr Leu Val His Asn Gly  
 965 970 975  
 Thr Ser Ala Arg Ala Thr Thr Thr Pro Ala Ser Lys Ser Thr Pro Phe  
 980 985 990  
 Ser Ile Pro Ser His His Ser Asp Thr Pro Thr Thr Leu Ala Ser His  
 995 1000 1005  
 Ser Thr Lys Thr Asp Ala Ser Ser Thr His His Ser Ser Val Pro  
 1010 1015 1020  
 Pro Leu Thr Ser Ser Asn His Ser Thr Ser Pro Gln Leu Ser Thr  
 1025 1030 1035  
 Gly Val Ser Phe Phe Phe Leu Ser Phe His Ile Ser Asn Leu Gln  
 1040 1045 1050  
 Phe Asn Ser Ser Leu Glu Asp Pro Ser Thr Asp Tyr Tyr Gln Glu  
 1055 1060 1065  
 Leu Gln Arg Asp Ile Ser Glu Met Phe Leu Gln Ile Tyr Lys Gln  
 1070 1075 1080

Gly Gly Phe Leu Gly Leu Ser Asn Ile Lys Phe Arg Pro Gly Ser  
 1085 1090 1095  
 Val Val Val Gln Leu Thr Leu Ala Phe Arg Glu Gly Thr Ile Asn  
 1100 1105 1110  
 Val His Asp Val Glu Thr Gln Phe Asn Gln Tyr Lys Thr Glu Ala  
 1115 1120 1125  
 Ala Ser Arg Tyr Asn Leu Thr Ile Ser Asp Val Ser Val Ser Asp  
 1130 1135 1140  
 Val Pro Phe Pro Phe Ser Ala Gln Ser Gly Ala Gly Val Pro Gly  
 1145 1150 1155  
 Trp Gly Ile Ala Leu Leu Val Leu Val Cys Val Leu Val Ala Leu  
 1160 1165 1170  
 Ala Ile Val Tyr Leu Ile Ala Leu Ala Val Cys Gln Cys Arg Arg  
 1175 1180 1185  
 Lys Asn Tyr Gly Gln Leu Asp Ile Phe Pro Ala Arg Asp Thr Tyr  
 1190 1195 1200  
 His Pro Met Ser Glu Tyr Pro Thr Tyr His Thr His Gly Arg Tyr  
 1205 1210 1215  
 Val Pro Pro Ser Ser Thr Asp Arg Ser Pro Tyr Glu Lys Val Ser  
 1220 1225 1230  
 Ala Gly Asn Gly Gly Ser Ser Leu Ser Tyr Thr Asn Pro Ala Val  
 1235 1240 1245  
 Ala Ala Ala Ser Ala Asn Leu  
 1250 1255  
 <210> 11  
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 <213> Homo sapiens  
 <400> 11  
 Ala Ala Ala Lys Glu Gly Lys Lys Ser Arg Asp Arg Glu Arg Pro Pro  
 1 5 10 15  
 Ser Val Pro Ala Leu Arg Glu Gln Pro Pro Glu Thr Glu Pro Gln Pro  
 20 25 30  
 Ala Trp Lys Met Pro Arg Ser Cys Cys Ser Arg Ser Gly Ala Leu Leu  
 35 40 45



Leu Ala Leu Leu Leu Gln Ala Ser Met Glu Val Arg Gly Trp Cys Leu  
 50 55 60  
 Glu Ser Ser Gln Cys Gln Asp Leu Thr Thr Glu Ser Asn Leu Leu Glu  
 65 70 75 80  
 Cys Ile Arg Ala Cys Lys Pro Asp Leu Ser Ala Glu Thr Pro Met Phe  
 85 90 95  
 Pro Gly Asn Gly Asp Glu Gln Pro Leu Thr Glu Asn Pro Arg Lys Tyr  
 100 105 110  
 Val Met Gly His Phe Arg Trp Asp Arg Phe Gly Arg Arg Asn Ser Ser  
 115 120 125  
 Ser Ser Gly Ser Ser Gly Ala Gly Gln Lys Arg Glu Asp Val Ser Ala  
 130 135 140  
 Gly Glu Asp Cys Gly Pro Leu Pro Glu Gly Gly Pro Glu Pro Arg Ser  
 145 150 155 160  
 Asp Gly Ala Lys Pro Gly Pro Arg Glu Gly Lys Arg Ser Tyr Ser Met  
 165 170 175  
 Glu His Phe Arg Trp Gly Lys Pro Val Gly Lys Lys Arg Arg Pro Val  
 180 185 190  
 Lys Val Tyr Pro Asn Gly Ala Glu Asp Glu Ser Ala Glu Ala Phe Pro  
 195 200 205  
 Leu Glu Phe Lys Arg Glu Leu Thr Gly Gln Arg Leu Arg Glu Gly Asp  
 210 215 220  
 Gly Pro Asp Gly Pro Ala Asp Asp Gly Ala Gly Ala Gln Ala Asp Leu  
 225 230 235 240  
 Glu His Ser Leu Leu Val Ala Ala Glu Lys Lys Asp Glu Gly Pro Tyr  
 245 250 255  
 Arg Met Glu His Phe Arg Trp Gly Ser Pro Pro Lys Asp Lys Arg Tyr  
 260 265 270  
 Gly Gly Phe Met Thr Ser Glu Lys Ser Gln Thr Pro Leu Val Thr Leu  
 275 280 285  
 Phe Lys Asn Ala Ile Ile Lys Asn Ala Tyr Lys Lys Gly Glu  
 290 295 300

<210> 12  
 <211> 31  
 <212> PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 12

His His His His His His Ser Ser Ser Ser Gly Ser Ser Ser Ser Gly  
 1 5 10 15

Ser Ser Ser Ser Gly Gly Arg Gly Asp Ser Gly Arg Gly Asp Ser  
 20 25 30

&lt;210&gt; 13

&lt;211&gt; 45

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 13

Gly Thr Ile Asn Val His Asp Val Glu Thr Gln Phe Asn Gln Tyr Lys  
 1 5 10 15

Thr Glu Ala Ala Ser Arg Tyr Asn Leu Thr Ile Ser Asp Val Ser Val  
 20 25 30

Ser Asp Val Pro Phe Pro Phe Ser Ala Gln Ser Gly Ala  
 35 40 45

&lt;210&gt; 14

&lt;211&gt; 146

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 14

Gly Thr Ile Asn Val His Asp Val Glu Thr Gln Phe Asn Gln Tyr Lys  
 1 5 10 15

Thr Glu Ala Ala Ser Arg Tyr Asn Leu Thr Ile Ser Asp Val Ser Val  
 20 25 30

Ser Asp Val Pro Phe Pro Phe Ser Ala Gln Ser Gly Ala Gly Val Pro  
 35 40 45

Gly Trp Gly Ile Ala Leu Leu Val Leu Val Cys Val Leu Val Ala Leu  
 50 55 60

Ala Ile Val Tyr Leu Ile Ala Leu Ala Val Cys Gln Cys Arg Arg Lys  
 65 70 75 80

Asn Tyr Gly Gln Leu Asp Ile Phe Pro Ala Arg Asp Thr Tyr His Pro  
 85 90 95

Met Ser Glu Tyr Pro Thr Tyr His Thr His Gly Arg Tyr Val Pro Pro  
 100 105 110

Ser Ser Thr Asp Arg Ser Pro Tyr Glu Lys Val Ser Ala Gly Asn Gly  
 115 120 125

Gly Ser Ser Leu Ser Tyr Thr Asn Pro Ala Val Ala Ala Ala Ser Ala  
 130 135 140

Asn Leu  
 145

<210> 15  
 <211> 171  
 <212> PRT  
 <213> Homo sapiens

<400> 15

Gly Phe Leu Gly Leu Ser Asn Ile Lys Phe Arg Pro Gly Ser Val Val  
 1 5 10 15

Val Gln Leu Thr Leu Ala Phe Arg Glu Gly Thr Ile Asn Val His Asp  
 20 25 30

Val Glu Thr Gln Phe Asn Gln Tyr Lys Thr Glu Ala Ala Ser Arg Tyr  
 35 40 45

Asn Leu Thr Ile Ser Asp Val Ser Val Ser Asp Val Pro Phe Pro Phe  
 50 55 60

Ser Ala Gln Ser Gly Ala Gly Val Pro Gly Trp Gly Ile Ala Leu Leu  
 65 70 75 80

Val Leu Val Cys Val Leu Val Ala Leu Ala Ile Val Tyr Leu Ile Ala  
 85 90 95

Leu Ala Val Cys Gln Cys Arg Arg Lys Asn Tyr Gly Gln Leu Asp Ile  
 100 105 110

Phe Pro Ala Arg Asp Thr Tyr His Pro Met Ser Glu Tyr Pro Thr Tyr  
 115 120 125

His Thr His Gly Arg Tyr Val Pro Pro Ser Ser Thr Asp Arg Ser Pro  
 130 135 140

Tyr Glu Lys Val Ser Ala Gly Asn Gly Gly Ser Ser Leu Ser Tyr Thr  
 145 150 155 160

Asn Pro Ala Val Ala Ala Ala Ser Ala Asn Leu  
 165 170

<210> 16  
 <211> 275  
 <212> PRT  
 <213> Homo sapiens

<400> 16

Ala Thr Thr Thr Pro Ala Ser Lys Ser Thr Pro Phe Ser Ile Pro Ser  
 1 5 10 15  
 His His Ser Asp Thr Pro Thr Thr Leu Ala Ser His Ser Thr Lys Thr  
 20 25 30  
 Asp Ala Ser Ser Thr His His Ser Thr Val Pro Pro Leu Thr Ser Ser  
 35 40 45  
 Asn His Ser Thr Ser Pro Gln Leu Ser Thr Gly Val Ser Phe Phe Phe  
 50 55 60  
 Leu Ser Phe His Ile Ser Asn Leu Gln Phe Asn Ser Ser Leu Glu Asp  
 65 70 75 80  
 Pro Ser Thr Asp Tyr Tyr Gln Glu Leu Gln Arg Asp Ile Ser Glu Met  
 85 90 95  
 Phe Leu Gln Ile Tyr Lys Gln Gly Gly Phe Leu Gly Leu Ser Asn Ile  
 100 105 110  
 Lys Phe Arg Pro Gly Ser Val Val Val Gln Leu Thr Leu Ala Phe Arg  
 115 120 125  
 Glu Gly Thr Ile Asn Val His Asp Val Glu Thr Gln Phe Asn Gln Tyr  
 130 135 140  
 Lys Thr Glu Ala Ala Ser Arg Tyr Asn Leu Thr Ile Ser Asp Val Ser  
 145 150 155 160  
 Val Ser Asp Val Pro Phe Pro Phe Ser Ala Gln Ser Gly Ala Gly Val  
 165 170 175  
 Pro Gly Trp Gly Ile Ala Leu Leu Val Leu Val Cys Val Leu Val Ala  
 180 185 190  
 Leu Ala Ile Val Tyr Leu Ile Ala Leu Ala Val Cys Gln Cys Arg Arg  
 195 200 205  
 Lys Asn Tyr Gly Gln Leu Asp Ile Phe Pro Ala Arg Asp Thr Tyr His  
 210 215 220  
 Pro Met Ser Glu Tyr Pro Thr Tyr His Thr His Gly Arg Tyr Val Pro  
 225 230 235 240  
 Pro Ser Ser Thr Asp Arg Ser Pro Tyr Glu Lys Val Ser Ala Gly Asn  
 245 250 255  
 Gly Gly Ser Ser Leu Ser Tyr Thr Asn Pro Ala Val Ala Ala Ala Ser  
 260 265 270

Ala Asn Leu  
275

<210> 17  
<211> 180  
<212> PRT  
<213> Homo sapiens  
<400> 17

Gly Ser Gly His Ala Ser Ser Thr Pro Gly Gly Glu Lys Glu Thr Ser  
1 5 10 15

Ala Thr Gln Arg Ser Ser Val Pro Ser Ser Thr Glu Lys Asn Ala Phe  
20 25 30

Asn Ser Ser Leu Glu Asp Pro Ser Thr Asp Tyr Tyr Gln Glu Leu Gln  
35 40 45

Arg Asp Ile Ser Glu Met Phe Leu Gln Ile Tyr Lys Gln Gly Gly Phe  
50 55 60

Leu Gly Leu Ser Asn Ile Lys Phe Arg Pro Gly Ser Val Val Val Gln  
65 70 75 80

Leu Thr Leu Ala Phe Arg Glu Gly Thr Ile Asn Val His Asp Met Glu  
85 90 95

Thr Gln Phe Asn Gln Tyr Lys Thr Glu Ala Ala Ser Arg Tyr Asn Leu  
100 105 110

Thr Ile Ser Asp Val Ser Val Ser Asp Val Pro Phe Pro Phe Ser Ala  
115 120 125

Gln Ser Gly Ala Gly Val Pro Gly Trp Gly Ile Ala Leu Leu Val Leu  
130 135 140

Val Cys Val Leu Val Ala Leu Ala Ile Val Tyr Leu Ile Ala Leu Ala  
145 150 155 160

Val Cys Gln Ser Ser Leu Ser Tyr Thr Asn Pro Ala Val Ala Ala Thr  
165 170 175

Ser Ala Asn Leu  
180

<210> 18  
<211> 383  
<212> PRT  
<213> Homo sapiens  
<400> 18

Leu Asp Pro Arg Val Arg Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro  
1 5 10 15

Gly Ser Thr Ala Pro Gln Ala His Gly Val Thr Ser Ala Pro Asp Thr  
 20 25 30  
 Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser  
 35 40 45  
 Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His  
 50 55 60  
 Gly Val Thr Ser Ala Pro Asp Asn Arg Pro Ala Leu Gly Ser Thr Ala  
 65 70 75 80  
 Pro Pro Val His Asn Val Thr Ser Ala Ser Gly Ser Ala Ser Gly Ser  
 85 90 95  
 Ala Ser Thr Leu Val His Asn Gly Thr Ser Ala Arg Ala Thr Thr Thr  
 100 105 110  
 Pro Ala Ser Lys Ser Thr Pro Phe Ser Ile Pro Ser His His Ser Asp  
 115 120 125  
 Thr Pro Thr Thr Leu Ala Ser His Ser Thr Lys Thr Asp Ala Ser Ser  
 130 135 140  
 Thr His His Ser Ser Val Pro Pro Leu Thr Ser Ser Asn His Ser Thr  
 145 150 155 160  
 Ser Pro Gln Leu Ser Thr Gly Val Ser Phe Phe Phe Leu Ser Phe His  
 165 170 175  
 Ile Ser Asn Leu Gln Phe Asn Ser Ser Leu Glu Asp Pro Ser Thr Asp  
 180 185 190  
 Tyr Tyr Gln Glu Leu Gln Arg Asp Ile Ser Glu Met Phe Leu Gln Ile  
 195 200 205  
 Tyr Lys Gln Gly Gly Phe Leu Gly Leu Ser Asn Ile Lys Phe Arg Pro  
 210 215 220  
 Gly Ser Val Val Val Gln Leu Thr Leu Ala Phe Arg Glu Gly Thr Ile  
 225 230 235 240  
 Asn Val His Asp Val Glu Thr Gln Phe Asn Gln Tyr Lys Thr Glu Ala  
 245 250 255  
 Ala Ser Arg Tyr Asn Leu Thr Ile Ser Asp Val Ser Val Ser Asp Val  
 260 265 270  
 Pro Phe Pro Phe Ser Ala Gln Ser Gly Ala Gly Val Pro Gly Trp Gly  
 275 280 285

Ile Ala Leu Leu Val Leu Val Cys Val Leu Val Ala Leu Ala Ile Val  
290 295 300

Tyr Leu Ile Ala Leu Ala Val Cys Gln Cys Arg Arg Lys Asn Tyr Gly  
305 310 315 320

Gln Leu Asp Ile Phe Pro Ala Arg Asp Thr Tyr His Pro Met Ser Glu  
325 330 335

Tyr Pro Thr Tyr His Thr His Gly Arg Tyr Val Pro Pro Ser Ser Thr  
340 345 350

Asp Arg Ser Pro Tyr Glu Lys Val Ser Ala Gly Asn Gly Gly Ser Ser  
355 360 365

Leu Ser Tyr Thr Asn Pro Ala Val Ala Ala Ala Ser Ala Asn Leu  
370 375 380

<210> 19  
<211> 19  
<212> PRT  
<213> Homo sapiens

<400> 19

Met Thr Pro Gly Thr Gln Ser Pro Phe Phe Leu Leu Leu Leu Leu Thr  
1 5 10 15

Val Leu Thr

<210> 20  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 20

Met Thr Pro Gly Thr Gln Ser Pro Phe Phe Leu Leu Leu Leu Leu Thr  
1 5 10 15

Val Leu Thr Val Val Thr Ala  
20

<210> 21  
<211> 23  
<212> PRT  
<213> Homo sapiens

<400> 21

Met Thr Pro Gly Thr Gln Ser Pro Phe Phe Leu Leu Leu Leu Leu Thr  
1 5 10 15

Val Leu Thr Val Val Thr Gly

20

<210> 22  
 <211> 50  
 <212> PRT  
 <213> Homo sapiens

<400> 22

Thr Ile Asn Val His Asp Val Glu Thr Gln Phe Asn Gln Tyr Lys Thr  
 1 5 10 15

Glu Ala Ala Ser Pro Tyr Asn Leu Thr Ile Ser Asp Val Ser Val Ser  
 20 25 30

Asp Val Pro Phe Pro Phe Ser Ala Gln Ser Gly Ala His His His His  
 35 40 45

His His  
 50

<210> 23  
 <211> 63  
 <212> PRT  
 <213> Homo sapiens

<400> 23

Ser Val Val Val Gln Leu Thr Leu Ala Phe Arg Glu Gly Thr Ile Asn  
 1 5 10 15

Val His Asp Val Glu Thr Gln Phe Asn Gln Tyr Lys Thr Glu Ala Ala  
 20 25 30

Ser Pro Tyr Asn Leu Thr Ile Ser Asp Val Ser Val Ser Asp Val Pro  
 35 40 45

Phe Pro Phe Ser Ala Gln Ser Gly Ala His His His His His His  
 50 55 60

<210> 24  
 <211> 19  
 <212> PRT  
 <213> Homo sapiens

<400> 24

His His His His His His Ser Val Val Val Gln Leu Thr Leu Ala Phe  
 1 5 10 15

Arg Glu Gly

<210> 25  
 <211> 44  
 <212> PRT  
 <213> Homo sapiens



&lt;400&gt; 25

Thr Ile Asn Val His Asp Val Glu Thr Gln Phe Asn Gln Tyr Lys Thr  
 1 5 10 15

Glu Ala Ala Ser Arg Tyr Asn Leu Thr Ile Ser Asp Val Ser Val Ser  
 20 25 30

Asp Val Pro Phe Pro Phe Ser Ala Gln Ser Gly Ala  
 35 40

&lt;210&gt; 26

&lt;211&gt; 44

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 26

Thr Ile Asn Val His Asp Val Glu Thr Gln Phe Asn Gln Tyr Lys Thr  
 1 5 10 15

Glu Ala Ala Ser Pro Tyr Asn Leu Thr Ile Ser Asp Val Ser Val Ser  
 20 25 30

Asp Val Pro Phe Pro Phe Ser Ala Gln Ser Gly Ala  
 35 40

&lt;210&gt; 27

&lt;211&gt; 13

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 27

Ser Val Val Val Gln Leu Thr Leu Ala Phe Arg Glu Gly  
 1 5 10

&lt;210&gt; 28

&lt;211&gt; 57

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 28

Ser Val Val Val Gln Leu Thr Leu Ala Phe Arg Glu Gly Thr Ile Asn  
 1 5 10 15

Val His Asp Val Glu Thr Gln Phe Asn Gln Tyr Lys Thr Glu Ala Ala  
 20 25 30

Ser Pro Tyr Asn Leu Thr Ile Ser Asp Val Ser Val Ser Asp Val Pro  
 35 40 45

Phe Pro Phe Ser Ala Gln Ser Gly Ala  
 50 55

<210> 29  
<211> 51  
<212> PRT  
<213> Homo sapiens

<400> 29

Gly Thr Ile Asn Val His Asp Val Glu Thr Gln Phe Asn Gln Tyr Lys  
1 5 10 15

Thr Glu Ala Ala Ser Arg Tyr Asn Leu Thr Ile Ser Asp Val Ser Val  
20 25 30

Ser Asp Val Pro Phe Pro Phe Ser Ala Gln Ser Gly Ala His His His  
35 40 45

His His His  
50